AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (previously presented) A method of cell search in a wireless communication systems having a plurality of base stations and a mobile station, each of the plurality of base stations serving a separate cell within a service area and transmitting a common primary synchronization code (PSC) in a primary synchronization channel within a slot of a radio frame, the method including the steps of:

(a) scanning through radio channels in scanning increments corresponding to a standard channel raster;

(b) estimating the PSC signal-to-noise ratio of each radio channel;

(c) when a PSC signal-to-noise ratio is above a first predetermined threshold level, completing a cell search procedure including slot synchronization, frame synchronization and scrambling code detection steps for that radio channel;

(d) when the cell search procedure is successfully completed for the radio channel in step (c), increasing the scanning increments to the broadcast frequency separation between cells;

(e) when all radio channels are scanned in step (d), sorting the scanned radio channels in descending order by PSC signal-to-noise ratio; and

(f) performing the cell search-procedure on each sorted radio channel in descending order.

2. (previously presented) A method of cell search according to claim 1, wherein when the cell search procedure defined by steps (a) to (f) is not successful, the method includes the step of:

when more than a predetermined number of sorted radio channels have been searched without detecting cells on any of the searched radio channels, discontinuing the cell search procedure.

3. (previously presented) A mobile station for use in a wireless communication system including a plurality of base stations, each of the plurality of base stations serving a separate cell within a service area and transmitting a common primary synchronization code (PSC) in a primary synchronization channel within a slot of a radio frame, the mobile station including:

scanning means for scanning through possible radio channels;

cell search means for completing a cell search procedure including slot synchronization means, frame synchronization means and scrambling code detection means; and

processing means for controlling operation of the mobile station, wherein the scanning means scans through possible radio channels in scanning increments corresponding to a standard channel raster;

the slot synchronization means estimates the PSC signal-to-noise ratio of each radio channel;

the cell search means acts to complete the cell search procedure for that radio channel, when the processing means determines that the PSC signal-to-noise ratio is above a first predetermined threshold level;

the processing means increasing the scanning increments to the broadcast frequency separation between cells, when the cell search procedure is successfully completed for that radio channel;

the processing means further acting to sort the scanned radio channels in descending order by PSC signal-to-noise ratio when all radio channels are scanned; and

the cell search means performing the cell search procedure on each sorted radio channel in descending order.

4. (previously presented) A mobile station according to claim 3, wherein, when the cell search procedure is not successful, the processing means acts to:

discontinue the cell search procedure when more than a predetermined number of sorted radio channels have been searched without detecting cells on any of the searched radio channels.

5-6. (cancelled)